

WHAT IS CLAIMED IS:

1. A contents transmission/reception system.
comprising:
 - 5 a transmission device; and
at least one reception device that receives
contents from the transmission device;
wherein the transmission device has:
 - an authentication and key exchange processing
10 unit configured to carry out an authentication and key
exchange processing with a reception device that made a
contents transmission request;
a device identification information
transmission request unit configured to transmit a
15 device identification information request to the
reception device, such that the reception device
transmits a device identification information;
a device identification information
registration unit configured to register the device
20 identification information transmitted from the
reception device;
a device identification information search unit
configured to search out the device identification
information corresponding to an IP (Internet Protocol)
25 address of the reception device, from a network to
which the reception device is connected;

a comparison judgement unit configured to judge whether the device identification information searched out by the device identification information search unit and the device identification information registered by the device identification information registration unit coincide or not; and

a distribution condition determination unit configured to change a distribution condition for contents to be transmitted to the reception device that made the contents transmission request, according to a judgement result obtained by the comparison judgement unit; and

the reception device has:

a contents transmission request unit configured to make the contents transmission request to the transmission device; and

a device identification information transmission unit configured to transmit the device identification information of the reception device to the transmission device, upon receiving the device identification information request from the transmission device.

2. The contents transmission/reception system of claim 1, wherein the device identification information is a MAC address of a network interface, and the device

identification information search unit transmits a MAC
address search request by using an IP address of the
reception device as a key to a network segment to which
the reception device is connected, and receives a MAC
5 address search result.

3. The contents transmission/reception system of
claim 2, wherein the device identification information
search unit searches out the MAC address corresponding
10 to the IP address of the reception device by an ARP
(Address Resolution Protocol).

4. The contents transmission/reception system of
claim 2, wherein the device identification information
15 transmission unit transmits the MAC address to the
transmission device by attaching an electronic
signature.

5. The contents transmission/reception system of
20 claim 4, further comprising a verification unit
configured to verify whether the MAC address is altered
or not, when the electronic signature is attached to
the MAC address;

wherein the device identification information
25 registration unit registers the MAC address only when
the verification unit judges that the MAC address is

not altered.

6. The contents transmission/reception system of claim 1, wherein the authentication and key exchange processing unit carries out the authentication and key exchange processing according to a DTCP (Digital Transmission Contents Protection).

7. The contents transmission/reception system of claim 1, wherein the reception device also has:

a reception device side authentication and key exchange processing unit configured to carry out the authentication and key exchange processing with the transmission device;

15 a network interface unit configured to receive encrypted contents from the transmission device; and

an encryption processing unit configured to decrypt the encrypted contents received by the network interface unit, by using a key exchanged by the reception device side authentication and key exchange processing unit.

8. A contents transmission device for transmitting contents to at least one reception device, the contents transmission device comprising:

an authentication and key exchange processing unit

configured to carry out an authentication and key exchange processing with a reception device that made a contents transmission request;

a device identification information transmission
5 request unit configured to transmit a device identification information request to the reception device, such that the reception device transmits a device identification information;

a device identification information registration
10 unit configured to register the device identification information transmitted from the reception device;

a device identification information search unit
configured to search out the device identification information corresponding to an IP (Internet Protocol)
15 address of the reception device, from a network to which the reception device is connected;

a comparison judgement unit configured to judge whether the device identification information searched out by the device identification information search
20 unit and the device identification information registered by the device identification information registration unit coincide or not; and

a distribution condition determination unit
configured to change a distribution condition for
25 contents to be transmitted to the reception device that made the contents transmission request, according to a

judgement result obtained by the comparison judgement unit.

9. A contents transmission/reception system,
5 comprising:
- a transmission device; and
 - at least one reception device that receives contents from the transmission device;
 - wherein a reception device has:
- 10 a contents transmission request unit configured to make a contents transmission request to the transmission device;
- a first authentication and key exchange processing unit configured to carry out an
- 15 authentication and key exchange processing with the transmission device to which the contents transmission request is made;
- a device identification information transmission request unit configured to transmit a
- 20 device identification information request to the transmission device, such that the transmission device transmits a device identification information;
- a device identification information registration unit configured to register the device
- 25 identification information transmitted from the transmission device;

a device identification information search unit configured to search out the device identification information corresponding to an IP (Internet Protocol) address of the transmission device, from a network to which the transmission device is connected;

a comparison judgement unit configured to judge whether the device identification information searched out by the device identification information search unit and the device identification information registered by the device identification information registration unit coincide or not; and

a reception condition determination unit configured to determine a reception condition for contents to be transmitted from the transmission device to which the contents transmission request is made, according to a judgement result obtained by the comparison judgement unit; and

the transmission device has:

a device identification information transmission unit configured to transmit the device identification information of the transmission device to the reception device, upon receiving the device identification information request from the reception device;

a second authentication and key exchange processing unit configured to carry out an

authentication and key exchange processing with the reception device that made the contents transmission request; and

5 a contents transmission control unit configured to carry out contents transmission control according to the reception condition determined by the reception condition determination unit.

10 10. A contents reception device for receiving contents from a transmission device, the contents reception device comprising:

a contents transmission request unit configured to make a contents transmission request to the transmission device;

15 an authentication and key exchange processing unit configured to carry out an authentication and key exchange processing with the transmission device to which the contents transmission request is made;

20 a device identification information transmission request unit configured to transmit a device identification information request to the transmission device, such that the transmission device transmits a device identification information;

25 a device identification information registration unit configured to register the device identification information transmitted from the transmission device;

a device identification information search unit
configured to search out the device identification
information corresponding to an IP (Internet Protocol)
address of the transmission device, from a network to
5 which the transmission device is connected;

a comparison judgement unit configured to judge
whether the device identification information searched
out by the device identification information search
unit and the device identification information
10 registered by the device identification information
registration unit coincide or not; and

a reception condition determination unit
configured to determine a reception condition for
contents to be transmitted from the transmission device
15 to which the contents transmission request is made,
according to a judgement result obtained by the
comparison judgement unit.

11. A contents transmission/reception system.
20 comprising:

a transmission device; and

at least one reception device that receives
contents from the transmission device;

wherein the transmission device has:

25 a device identification information
transmission request unit configured to transmit a

device identification information request to a reception device that made a contents transmission request, such that the reception device transmits a device identification information;

5 a device identification information registration unit configured to register the device identification information transmitted from the reception device;

 an advance notice unit configured to make a
10 device identification information search advance notice, to the reception device;

 a device identification information search unit configured to search out the device identification information corresponding to an IP (Internet Protocol)
15 address of the reception device, from a network to which the reception device is connected;

 a comparison judgement unit configured to judge whether the device identification information searched out by the device identification information search
20 unit and the device identification information registered by the device identification information registration unit coincide or not;

 a request response reception judgement unit configured to judge whether a response to the device
25 identification information search advance notice is received or not; and

a distribution condition determination unit
configured to determine a distribution condition for
contents to be transmitted to the reception device that
made the contents transmission request, according to
5 judgement results obtained by the comparison judgement
unit and the request response reception judgement unit;
and

the reception device has:

a device information transmission unit
10 configured to transmit the device identification
information of the reception device and a device
identification information search advance notice
response to the transmission device, upon receiving the
device identification information request from the
15 transmission device.

12. The contents transmission/reception system of
claim 11, wherein the reception device also has:

a device identification information search
20 judgement unit configured to judge whether the device
identification information search request from the
transmission device is received or not; and

a contents reception control unit configured to
prohibit reception of contents from the transmission
25 device when the device identification information
search judgement unit judges that the device

identification information search request is not received.

13. A contents transmission device for transmitting
5 contents to at least one reception device, the contents transmission device comprising:

a device identification information transmission request unit configured to transmit a device identification information request to a reception
10 device that made a contents transmission request, such that the reception device transmits a device identification information;

a device identification information registration unit configured to register the device identification
15 information transmitted from the reception device;

an advance notice unit configured to make a device identification information search advance notice, to the reception device;

a device identification information search unit
20 configured to search out the device identification information corresponding to an IP (Internet Protocol) address of the reception device, from a network to which the reception device is connected;

a comparison judgement unit configured to judge
25 whether the device identification information searched out by the device identification information search

unit and the device identification information registered by the device identification information registration unit coincide or not;

5 a request response reception judgement unit configured to judge whether a response to the device identification information search advance notice is received or not; and

a distribution condition determination unit configured to determine a distribution condition for
10 contents to be transmitted to the reception device that made the contents transmission request, according to judgement results obtained by the comparison judgement unit and the request response reception judgement unit.

15 14. A contents transmission/reception system, comprising:

a transmission device; and

at least one reception device that receives contents from the transmission device;

20 wherein the transmission device has:

a device identification information search judgement unit configured to judge whether a device identification information search request from a reception device is received or not; and

25 a contents transmission control unit configured to prohibit transmission of contents to the reception

device when the device identification information search judgement unit judges that the device identification information search request is not received; and

5 the reception device has:

 a contents transmission request unit configured to make a contents transmission request to the transmission device;

 an authentication and key exchange processing
10 unit configured to carry out an authentication and key exchange processing with the transmission device to which the contents transmission request is made;

 a device identification information transmission request unit configured to transmit the
15 device identification information request to the transmission device, such that the transmission device transmits a device identification information;

 a device identification information registration unit configured to register the device
20 identification information transmitted from the reception device;

 an advance notice unit configured to make a device identification information search advance notice, to the transmission device;

25 a device identification information search unit configured to search out the device identification

information corresponding to an IP (Internet Protocol) address of the transmission device, from a network to which the transmission device is connected;

5 a comparison judgement unit configured to judge whether the device identification information searched out by the device identification information search unit and the device identification information registered by the device identification information registration unit coincide or not; and

10 a reception condition determination unit configured to determine a reception condition for contents to be transmitted from the transmission device to which the contents transmission request is made, according to a judgement result obtained by the
15 comparison judgement unit.

15. A contents reception device for receiving contents from a transmission device, the contents reception device comprising:

20 a contents transmission request unit configured to make a contents transmission request to the transmission device;

an authentication and key exchange processing unit configured to carry out an authentication and key
25 exchange processing with the transmission device to which the contents transmission request is made;

a device identification information transmission request unit configured to transmit a device identification information request to the transmission device, such that the transmission device transmits a device identification information;

a device identification information registration unit configured to register the device identification information transmitted from the reception device;

an advance notice unit configured to make a device identification information search advance notice, to the transmission device;

a device identification information search unit configured to search out the device identification information corresponding to an IP (Internet Protocol) address of the transmission device, from a network to which the transmission device is connected;

a comparison judgement unit configured to judge whether the device identification information searched out by the device identification information search unit and the device identification information, registered by the device identification information registration unit coincide or not; and

a reception condition determination unit configured to determine a reception condition for contents to be transmitted from the transmission device to which the contents transmission request is made,

according to a judgement result obtained by the
comparison judgement unit.

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